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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/676,708

10/01/2003

Yu Deng

CISCP835

8150

54406

7590

09/16/2008

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EXAMINER

SAWAGED, SARI S

ART UNIT

PAPER NUMBER

2623

MAIL DATE

DELIVERY MODE

09/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/676,708	Applicant(s) DENG ET AL.	
	Examiner SARI SAWAGED	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 8, 9, 10, 17, 24, 25, 26, 38, 39, 41, 43, 45, 47 rejected under 35 U.S.C. 103(a) as being unpatentable over Grobe et al. (hereinafter referred to as Grobe) (Optical metropolitan DWDM networks – an overview) in view of Horton et al. (hereinafter referred to as Horton) (US Pub No. 2004/0264468) in further view of Castel-Branco et al. (hereinafter referred to as Castel-Branco, presented in the previous Office Action) (Clock Recovery for Circuit Emulation Services over ATM).**

Claims 1, 5, 14, 23, 30, 41, 43, 45, 47:

Grobe discloses inserting a serial video data stream (SMPTE 259M, see Table 1 on page 29) into a network transport digital signal (GFP-T frames, see page 31) formatted in accordance with a hierarchical digital transmission standard (SONET/SDH, see page 27, 35).

Grobe also discloses a payload header being computed which includes a 2-byte CRC value associated with the payload since this is inherent to GFP as is

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dictated by the GFP standard. The header is computed in the sense that a CRC value must be computed for the payload. (See Fig. 6-1 in the ITU-T G.7041/Y.1303 NPL that was submitted by the applicant in IDS 6/17/2004).

Grobe, however doesn't disclose extracting bits from the sequence of horizontal scan lines to form data payloads or that the payload header includes a two byte time stamp counter value. The examiner understands that when the applicant states "extracting bits from said of horizontal scan lines to form data payloads", the applicant is referring to "embodiments of the present invention may remove EAV and SAV framing bytes that SDI employs to delineate horizontal scan lines that identify vertical blanking intervals. This would reduce the byte total." (See page 9 of the specification).

Horton, an inventor from the same or a similar field, discloses a method where repetitive portions of payload headers are suppressed (removed) at the transmitter and inserted back at a receiver so as to conserve transmission bandwidth (see [0009]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the video transmission method of Grobe to extract bits from the horizontal scan lines (encapsulate only video data and remove repetitive data such as EAV and SAV bytes) because it would have saved transmission bandwidth as taught by Horton.

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Castel-Branco, an inventor from the same or a similar field, discloses a time stamp counter value that is transmitted with the data to a receiver so as to recover the source clock frequency at the receiver (see Pgs. 618 and 619). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Grobe and Horton to include a 2-byte time stamp counter in the header so as to recover the source clock frequency at the receiver as disclosed by Castel-Branco.

Claims 8, 24, 39:

Please see the rejection of claim 1. Further, Grobe would inherently have a GFP-T demapper at the receiver to retrieve the data that was encapsulated within GFP-T frames at the transmitter. The deencapsulated data being formed to its original form by inserting the deleted bytes in accordance with the teachings of Horton as discussed in the rejection of claim 1.

Claims 9, 10, 25, 26:

Castel Branco discloses recovering clock timing based on time stamp counter values received (disclosed as RTS – Residual Time Stamp, pg. 618).

Castel Branco also discloses recovering clock timing by buffering received data in a buffer and reading out data of the buffer in accordance with a locally generated clock (“local clock”, pg. 619), wherein the clock frequency is varied by the occupancy of the buffer (“fill level” of the buffer, pg. 619).

Claims 17, 38:

Please see the rejection of claim 1. Further, the SDI video standard identifies lines by the EAV and SAV bytes, the serial video stream is automatically delineated upon encapsulation within the GFP-T frames. The number of lines per GFP-T frame would depend on the size of the extracted data and the size of the payload that GFP-T frame can encapsulate.

Claims 40, 42, 44, 46:

Horton, discloses a method where repetitive portions of payload headers are suppressed (removed) at the transmitter and inserted back at a receiver so as to conserve transmission bandwidth (as discussed in the rejection of claim 1).

3. Claim 6, 7, 15, 16, 21, 22, 31, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grobe in view of Horton in further view of Castel-Branco in even further view of Olsson et al. (hereinafter referred to as Olsson, presented in the previous office action) (Virtual Concatenations + LCAS).

Claims 6, 7, 15, 16, 21, 22, 31, 32:

Neither Grobe nor Horton nor Castel-Branco disclose using VC-3-6v or VT3-6v virtual concatenations.

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Olsson, an inventor from the same or a similar field, discloses several advantages to virtual concatenations, specifically, scalability, efficiency, compatibility, and resiliency. With the use of virtual concatenations, SONET pipes can be sized to match the desired data rate and avoid unnecessary waste. Virtually Concatenated channels are more easily routed through a network and eliminate stranded bandwidth. Virtual concatenations works across legacy networks that do not support large contiguous channels (See pages 2 and 3). It would have been obvious to modify the method of transmitting serial video of Grobe, Horton, and Castel-Branco to use virtual concatenations due to the advantages offered to the network as disclosed by Olsson.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will

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the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARI SAWAGED whose telephone number is (571)270-5085. The examiner can normally be reached on Mon-Thurs, 9:00AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDREW KOENIG can be reached on (571) 272-7296. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sari Sawaged/
Examiner, Art Unit 2623

/Andrew Y Koenig/
Supervisory Patent Examiner, Art Unit 2623

